

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
9 March 2006 (09.03.2006)

PCT

(10) International Publication Number
WO 2006/025994 A3

(51) International Patent Classification:
C03B 33/09 (2006.01)

(21) International Application Number:
PCT/US2005/026739

(22) International Filing Date: 28 July 2005 (28.07.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/605,971 31 August 2004 (31.08.2004) US

(71) Applicant (for all designated States except US): **GY-ROTRON TECHNOLOGY, INC.** [US/US]; Unit K, 2014 Ford Road, Bristol, PA 19007 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **SKLYAREVICH, Vladislav** [US/US]; 2701 Dudley Court, Bensalem, PA 19020 (US). **SHEVELEV, Mykhaylo** [UA/US]; 301 Heights Lane, Feasterville, PA 19052 (US).

(74) Agent: **CAROTHERS, Floyd, B.**; Carothers and Carothers, 445 Fort Pitt Boulevard, Suite 500, Pittsburgh, PA 15219 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

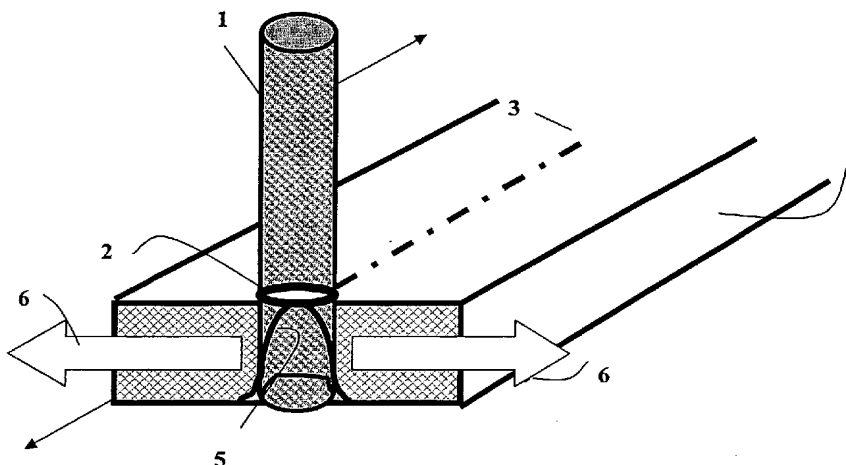
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))
- of inventorship (Rule 4.17(iv))

Published:

- with international search report

[Continued on next page]

(54) Title: A METHOD OF SEPARATING NON-METALLIC MATERIAL USING MICROWAVE RADIATION



(57) Abstract: A method of high speed cutting of non-metallic materials (14), preferably glass, is described. In the inventive method a concentrated microwave radiation (1) with appropriate frequency and power density is chosen so as to accomplish heating of at least one selected area (2) of the body at the required separating propagation path (3) to required temperature in a selected short time while ensuring that this temperature is large enough to create a thermal stress (6) through the thickness of the selected area that results in the separating of the body material.

WO 2006/025994 A3



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:

27 April 2006